**Lab 5 — Cinema Management System**

**ASSIGNMENT # 1**

**NAME: SAAD RAFIQUE**

**REG NO: SP25-BCS-121**

**SECTION: A**

**COURSE: Object-Oriented Programming**

**INSTRUCTOR: M. Shahid Bhatti**

**DATE: 1/10/2025**

## **Seat Class**

The seat class represents one seat in the cinema.  
 It stores information such as seat ID, seat type (Regular, Premium, VIP, or Recliner), price, and availability status.  
 It has methods to book and cancel a seat and a toString() method to show seat details in a readable form.

## **Screen Class**

The Screen class represents a single movie screen that contains multiple rows of seats.  
 It uses a 2D array of Seat objects to store all seats.  
 It has methods to book or cancel a seat by its ID and a toString() method to display all seats row by row.  
 Each row has different seat types and prices.

## **Cinema Class**

The Cinema class represents a cinema that has multiple screens.  
 It uses an array of Screen objects and provides methods to book or cancel a seat on a specific screen.  
 It also displays the cinema name and all screens with their seat information.

## **CityCinema Class**

The CityCinema class represents a city that contains several cinemas.  
 It holds an **array of** Cinema **objects** and allows booking or canceling seats in any cinema of that city.  
 The toString() method neatly prints the city name followed by all its cinemas and screens.

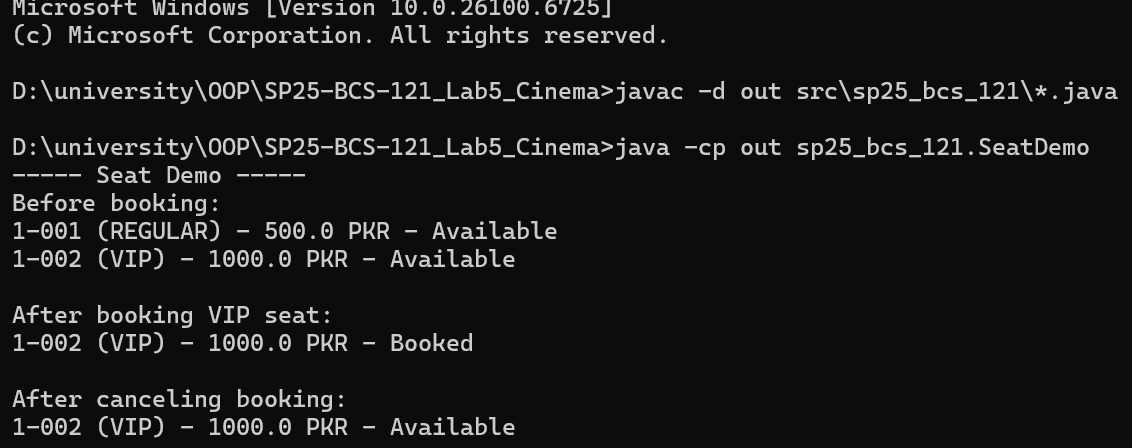
## **SeatDemo Class**

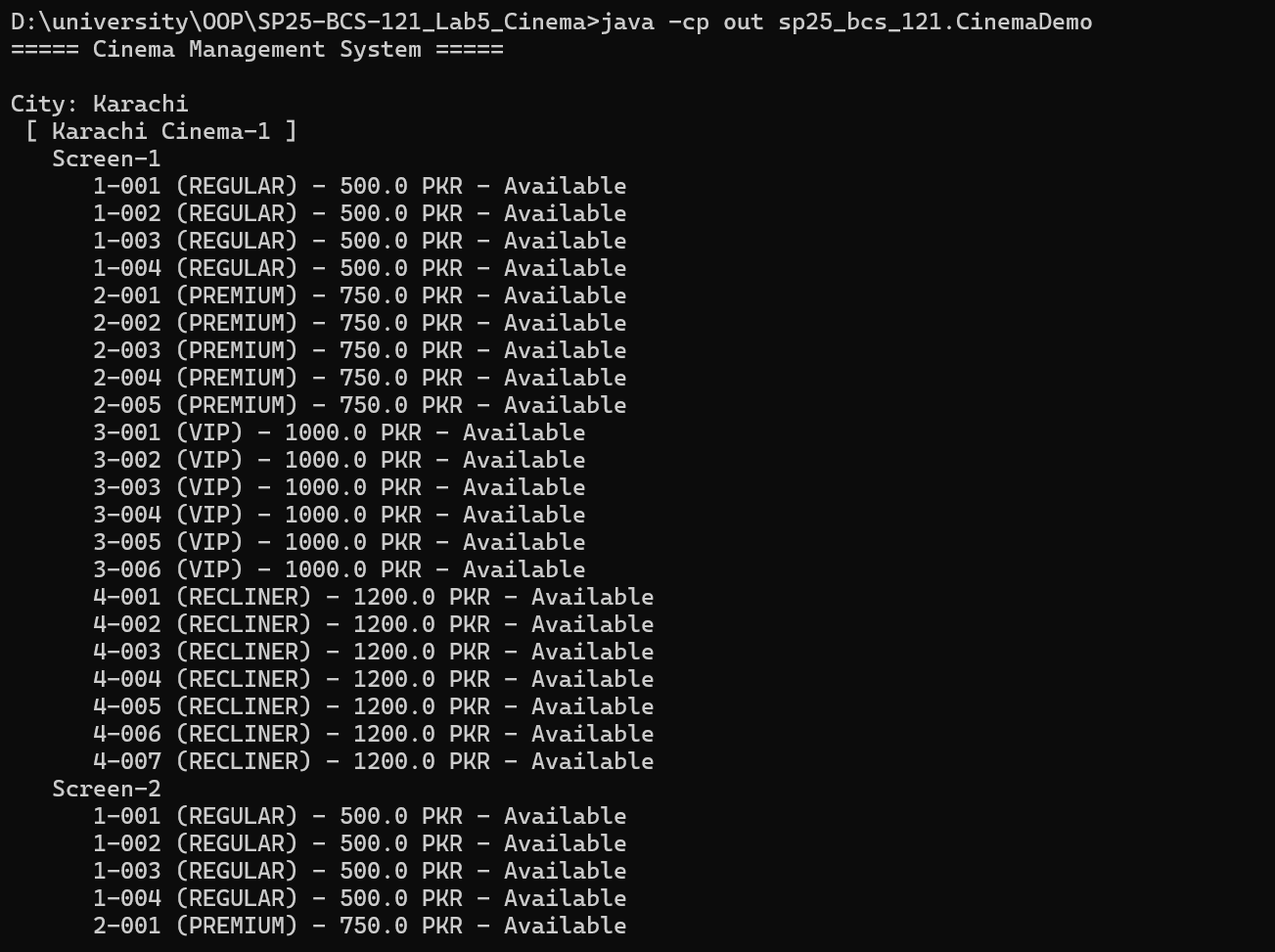
The SeatDemo class is a small testing class used to demonstrate the working of the Seat class.  
 It creates a few seat objects, books one of them, cancels it, and prints the results before and after booking.

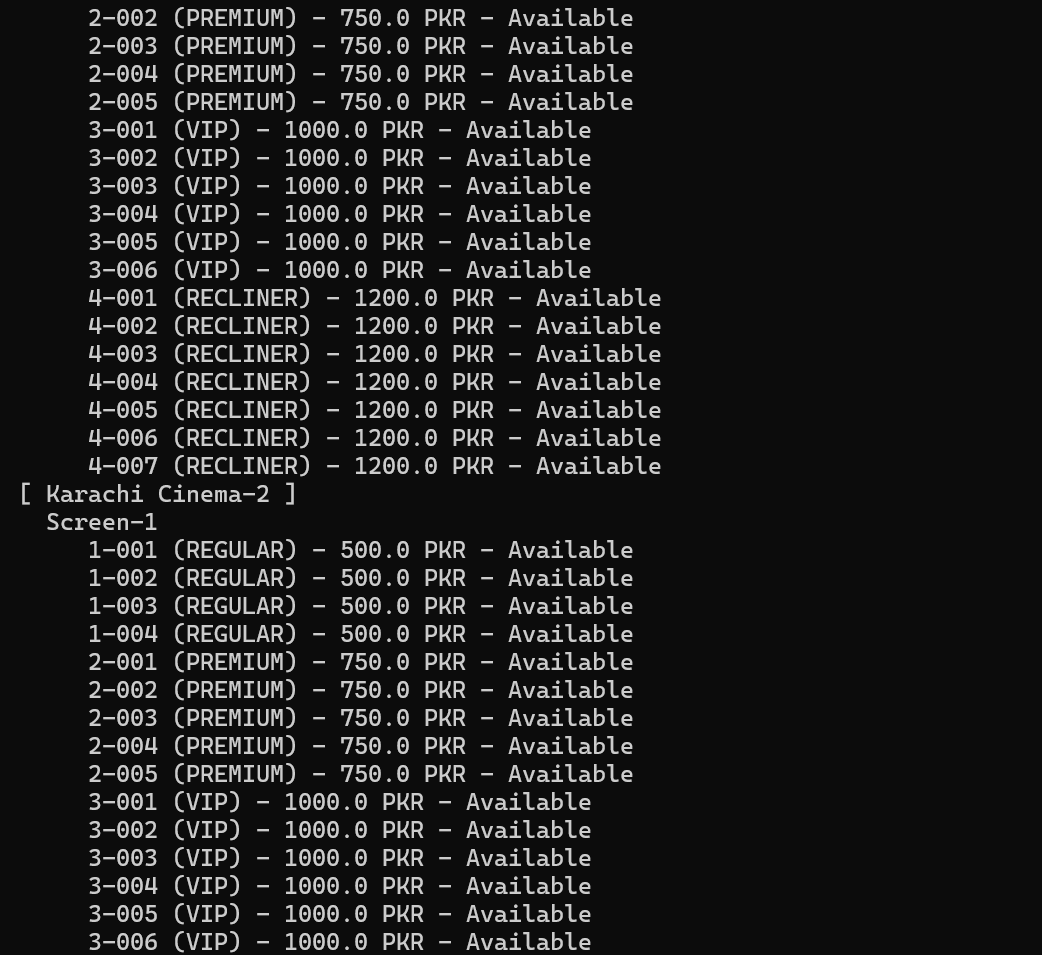
## **CinemaDemo Class**

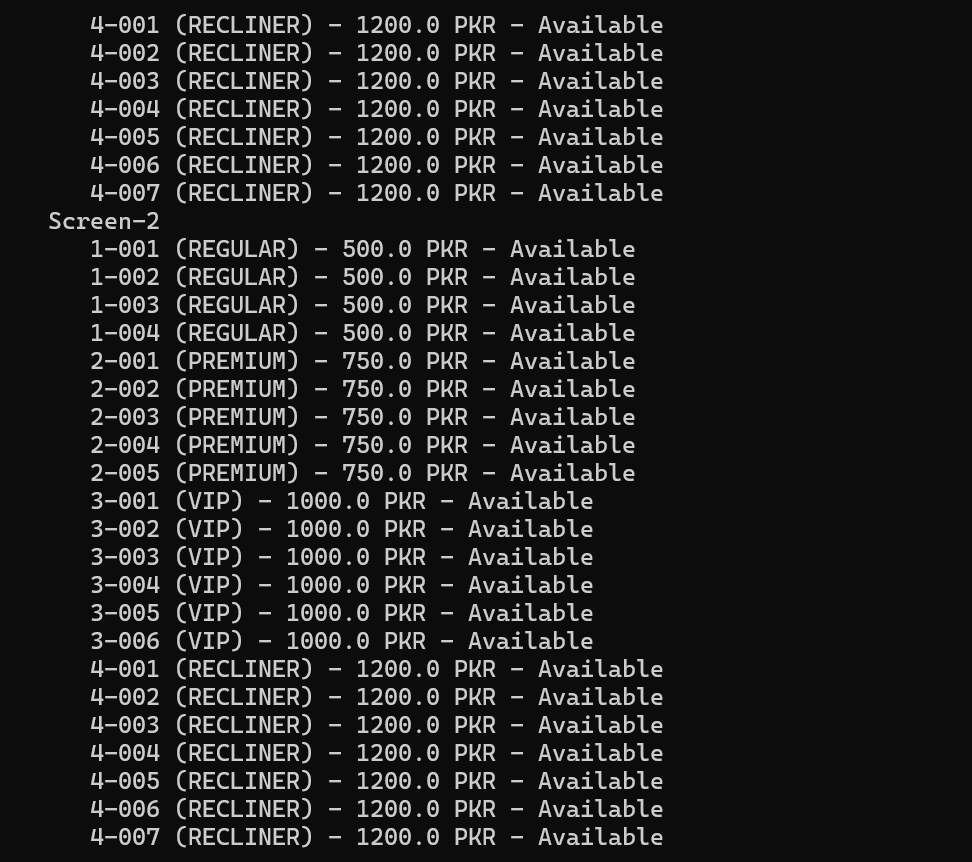
The CinemaDemo class is the main driver program that demonstrates the whole cinema management system.  
 It creates several cities (Karachi, Lahore, Islamabad), each with multiple cinemas and screens.  
 It shows how to book and cancel seats in different cities and prints the complete details of all cinemas and screens.

**OUTPUT**

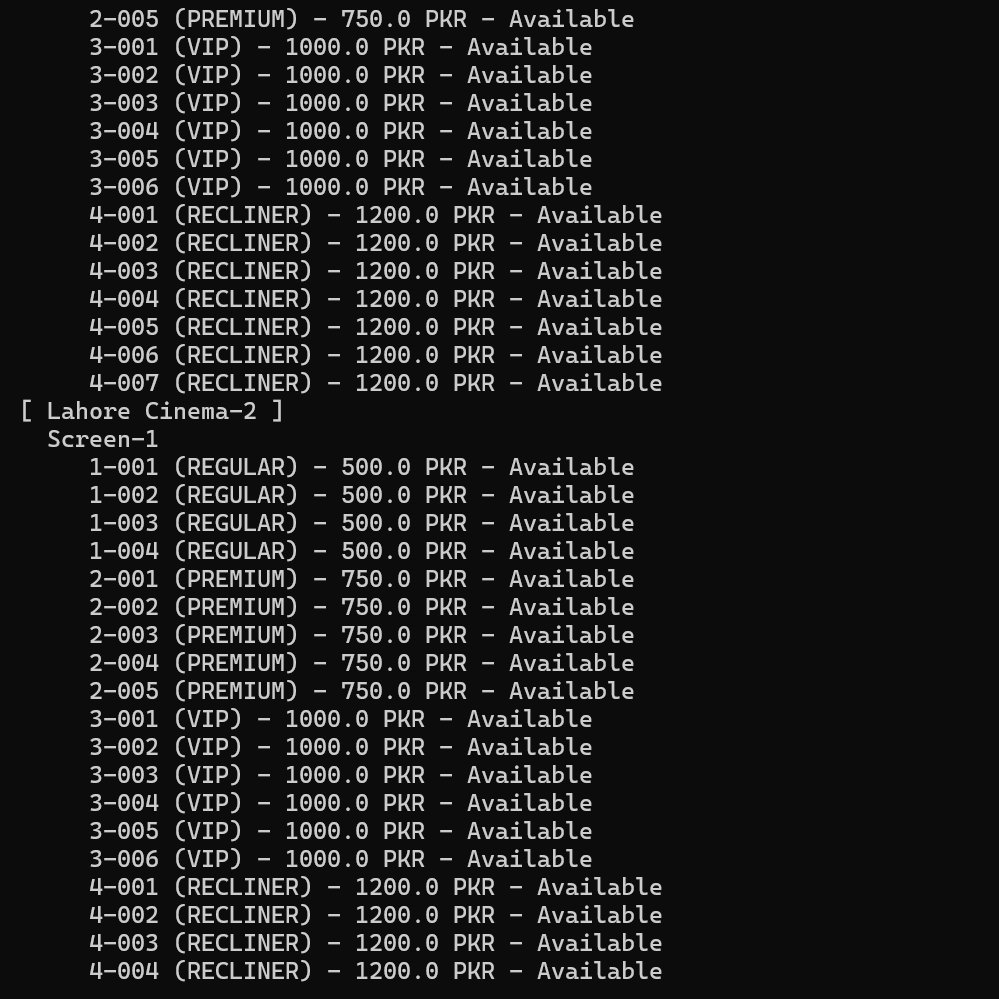
****

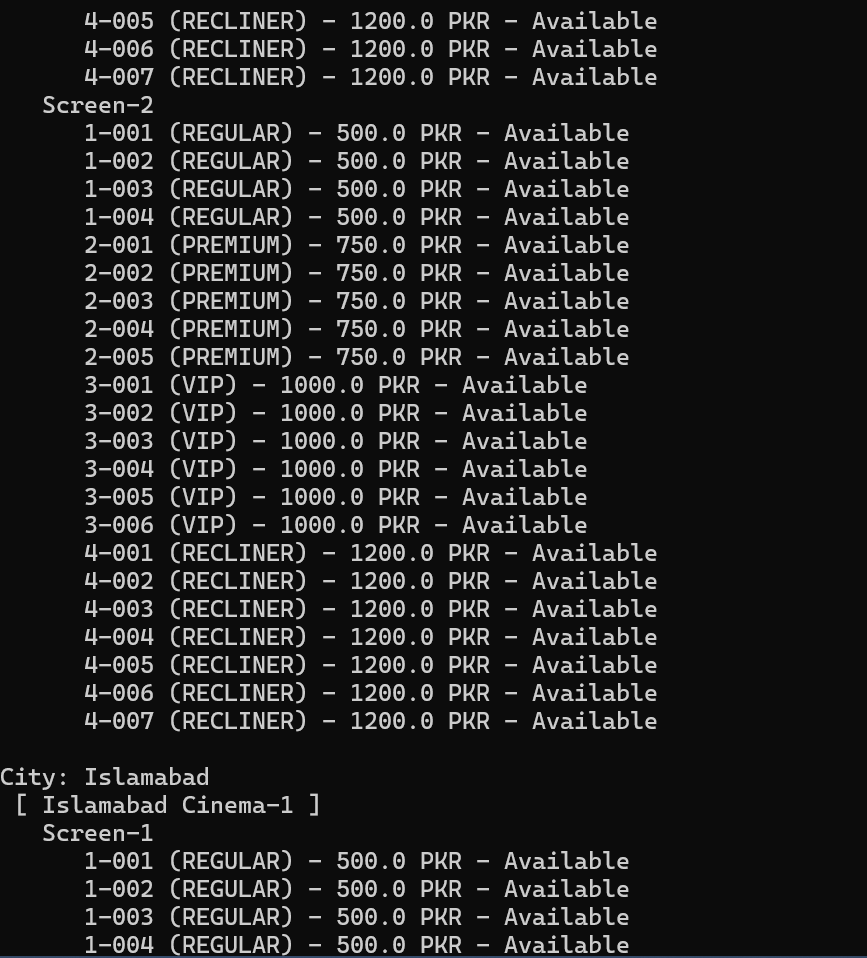
****

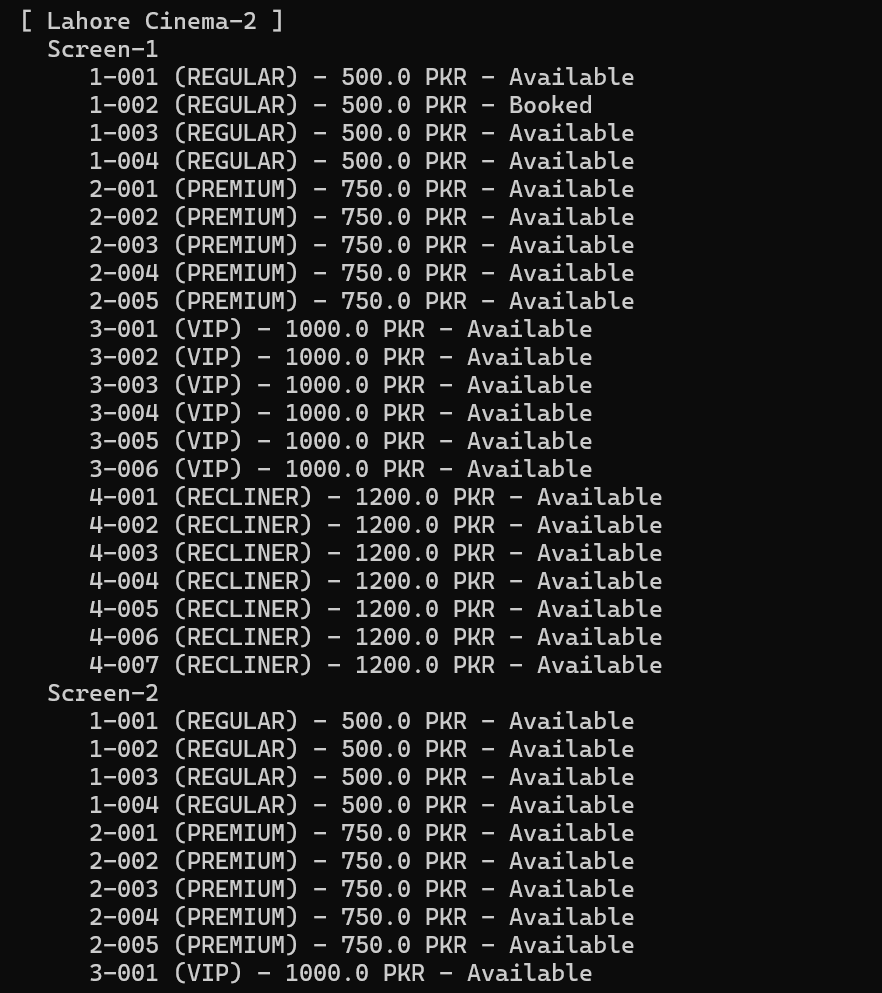
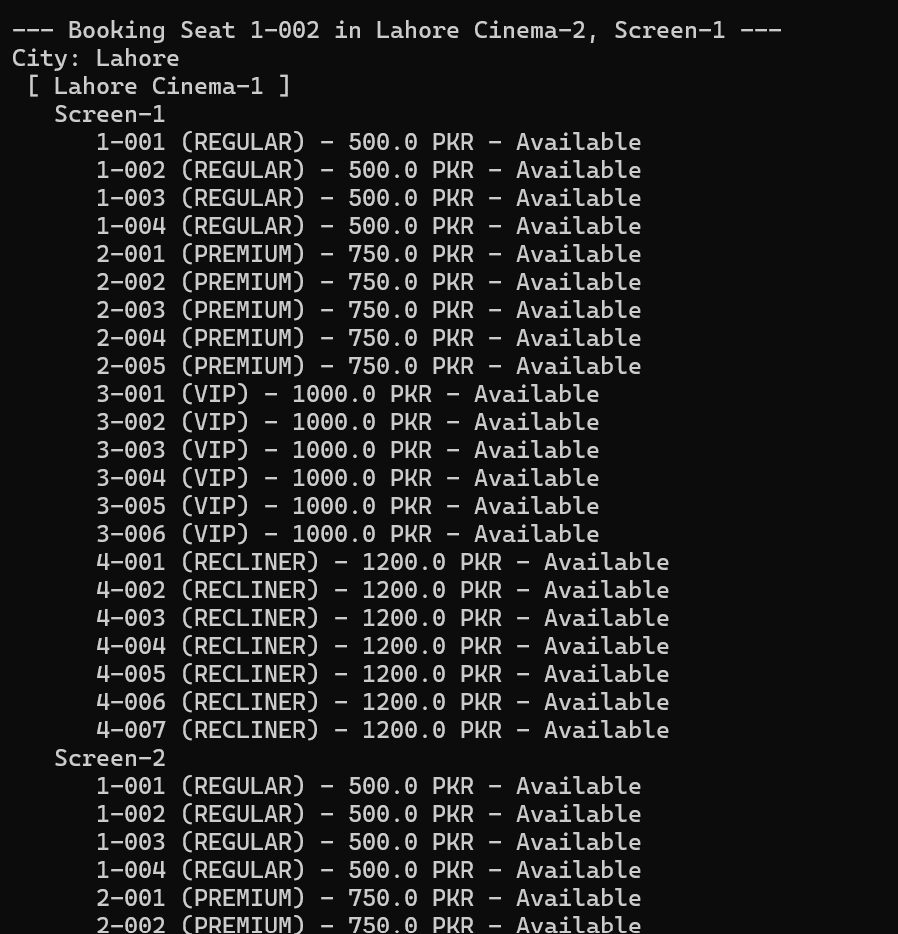
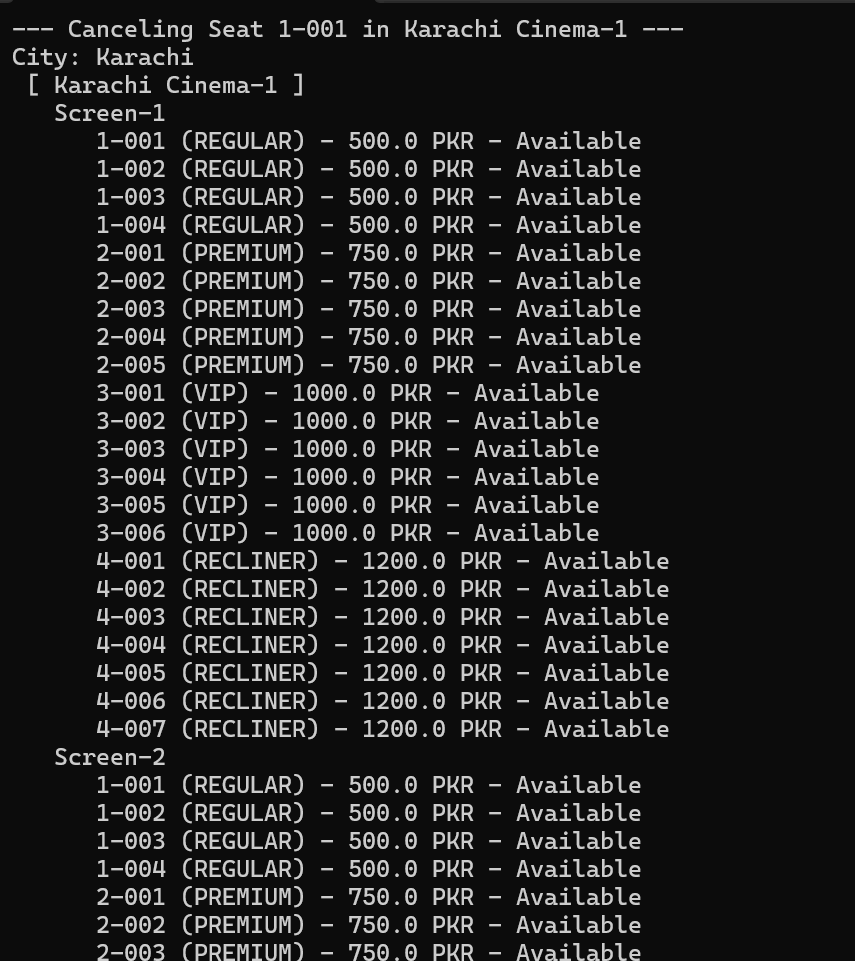
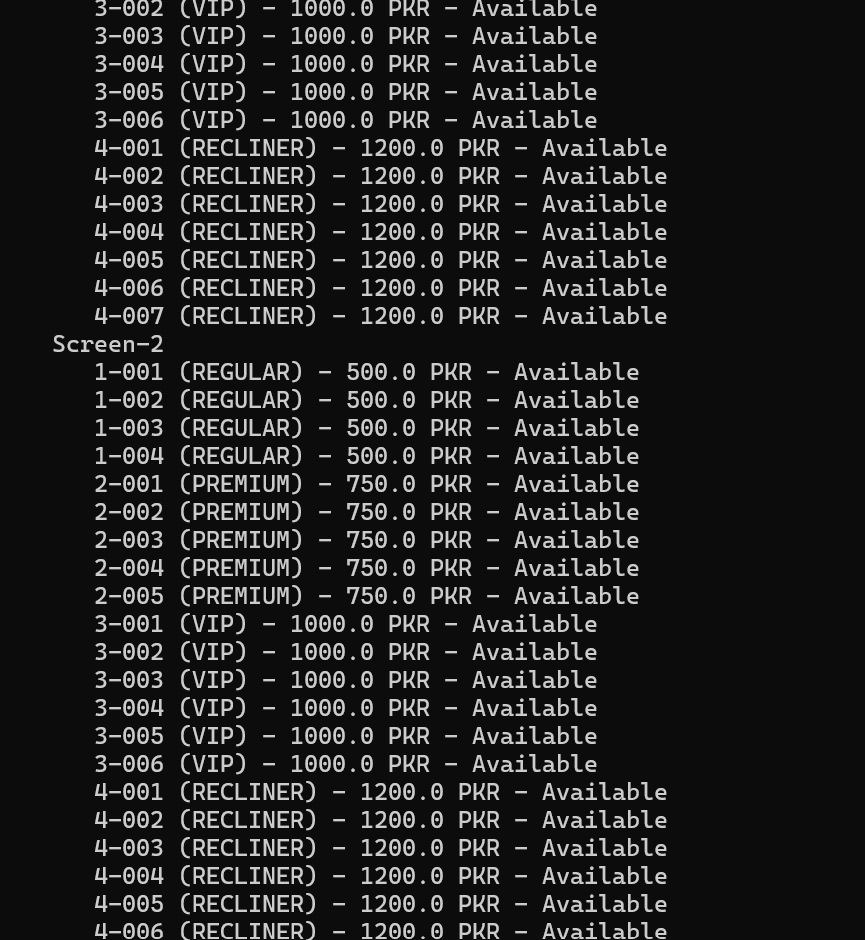
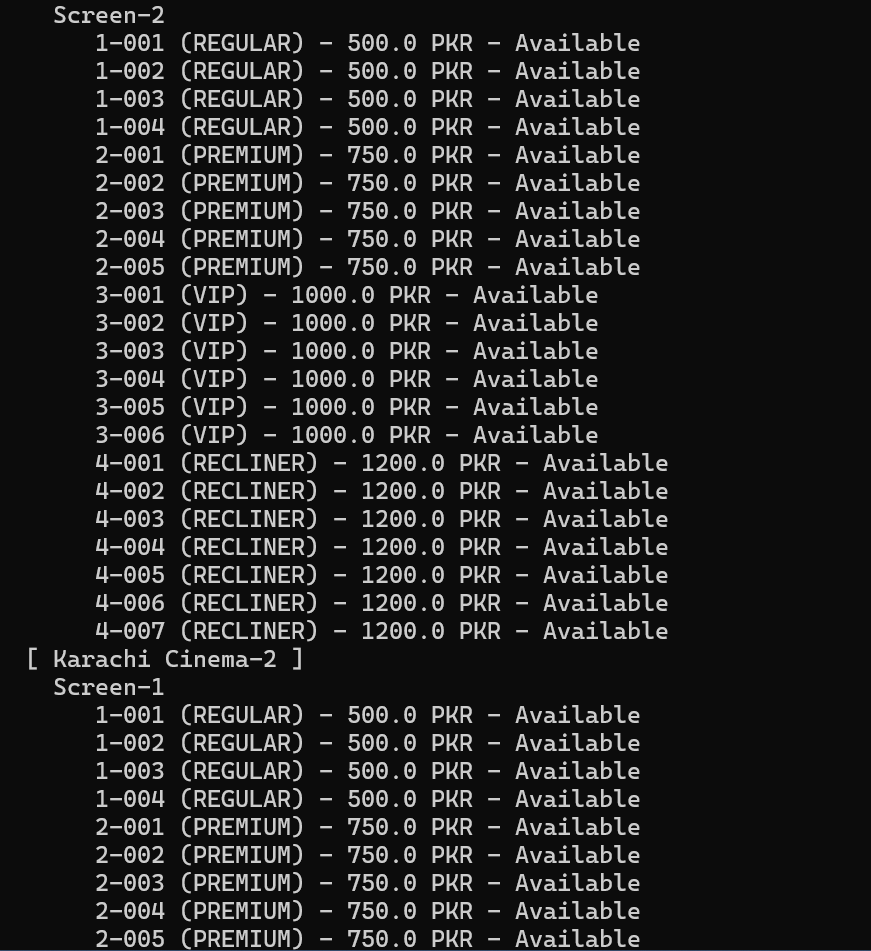
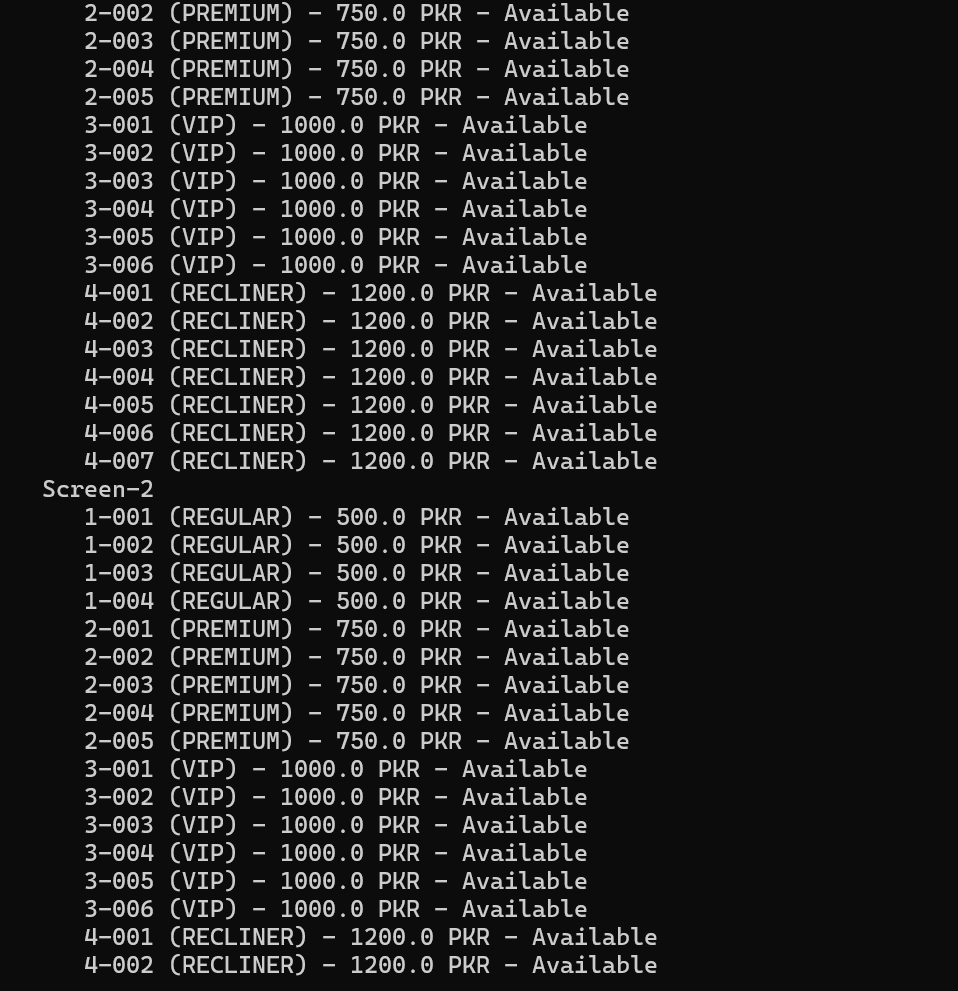
****

****

****

****

****

****